

SPECIFICATIONS INDEX

GOVERNMENT OF THE VIRGIN ISLANDS, DEPARTMENT OF HEALTH

ELDRA SHULTERBRANDT ANNEX FACILITY

GRANT NO. D12AP00350 (VI-CIP-2012-4)

St. Thomas, U. S. Virgin Islands

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01000 – SUMMARY OF WORK
DEPARTMENT OF HEALTH: ELDRA SHULTERBRANDT ANNEX FACILITY
GRANT NO. D12AP00350 (VI-CIP-2012-4)
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PART 1 GENERAL

1.01 DEFINITION OF WORK

- A. The term "CONSTRUCTION" shall be interpreted to mean "RENOVATION" throughout the Project Manual and Construction Documents.
- B. The term "CONTRACTOR" shall be interpreted to mean "RENOVATOR" throughout the Project Manual and Construction Documents.
- C. The Scope Of Work defined under the Project Manual and Construction Documents is limited to renovations and minor modifications only, not general construction.

1.02 PROJECT

- A. Project Name: DEPARTMENT OF HEALTH: ELDRA SHULTERBRANDT ANNEX FACILITY.
Owner's Name: GOVERNMENT OF THE VIRGIN ISLANDS, DEPARTMENT OF HEALTH (DOH). For the purpose of the renovation, DOH shall be the Owner.
- B. Facility Owner's Name: For the purpose of the renovation, Department of Health's Eldra Shulterbrandt Annex Facility shall be the Facility Owner's name.
- C. Architect's Name: JAREDIAN DESIGN GROUP
- D. The Project consists of the renovation of portions of the **Eldra Shulterbrandt Annex Facility** as shown on the Construction Documents prepared by the Jaredian Design Group – Architects, Engineers and Construction Managers.
- E. Scope Of Work:
 - 1. Electrical Upgrades – to accommodate installation of new commercial grade kitchen and laundry appliances;
 - 2. Plumbing – remove and replace two residential tubs and replace each with walk-in tubs, which will allow for handling patients who are physically challenged or immobilized by major health afflictions;
 - 3. Therapeutic Garden – will be constructed in an outdoor area of approximately 800 square feet. The garden will be located in outdoor space, which will accommodate plants that is critical to patient therapy;
 - 4. Concrete Access Pathway – construction of a concrete access pathway will allow for deliveries through an exterior door from the facility's pantry;
 - 5. Alternative Energy Retrofit – install rooftop photovoltaic panels and solar hot water heaters to reduce electrical consumption.
 - 6. Laundry Facility Ventilation System – install a new ventilation system to accommodate the requirements of the new laundry equipment;

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7. Bathroom Fixtures – remove and replace two residential tubs with walk-in tubs for patient safety, to allow for handling patients who are physically challenged or immobilized by major health afflictions;
 8. Kitchen Equipment – purchase commercial-grade kitchen equipment and ventilation system;
 9. Laundry Equipment – purchase commercial-grade washers and propane dryers.
- F. Owner will remove the following items before start of work:
1. N. A.

1.03 WORK BY OWNER

- A. Items noted NIC (Not In Contract) will be supplied and installed by Owner before Substantial Completion. Some items include: telecommunication network, security system, computers and modular furniture.
- B. Owner will remove the following items before start of work:
1. Refer to Contract Drawings for particular items to be removed.

1.04 SALVAGE BY CONTRACTOR

- A. Contractor shall remove and store the following, for later reinstallation by Contractor, prior to start of work:
1. Refer to Contract Drawings for particular items to be salvaged.

1.05 WORK BY OTHERS

- A. Furniture and Owner Supplied Equipment.
- B. Artwork.

1.06 OWNER FURNISHED PRODUCTS

- A. Products furnished by Owner include the following categories:
1. OFCI: Owner furnished Contractor installed.
 2. OFCR: Owner furnished Contractor rough-in;
 3. OFOI: Owner furnished Owner Installed.
- B. Owner Responsibilities for products in the following category: OFOI;
1. Arrange for and deliver necessary shop drawings, product data and samples.
 2. Arrange and pay for product delivery to the site in accordance with the construction schedule.
 3. Promptly inspect delivered products jointly with Contractor. Record shortages, damaged or defective products.
 4. Submit claims for transportation damage.
 5. Arrange for replacement of damaged, defective or missing items.
 6. Arrange for manufacturer's warranties, bonds, service and inspections as required.

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7. Assemble, install, connect, adjust, test and calibrate, and finish product.
 8. Arrange installation inspections required by regulatory agencies having jurisdiction.
- C. Contractor's Responsibilities (for all categories unless otherwise noted):
1. Coordinate installation of Owner furnished products with other portions of the Work.
 2. Designate submittal and delivery date for each product affecting construction schedule.
 3. Review submittals of Owner furnished products and verify rough-in requirements prior to installation for products in the following categories: OFCI, OFCR. Notify Architect of discrepancies that would affect installation and rough-ins.
 4. Promptly inspect products jointly with the Owner, record shortages, damaged or defective products listed in the following categories: OFCI.
 5. Protect products from damage after installation.
 6. Assemble, install connect, adjust, test and calibrate, and finish products listed in the following category: OFCI.
 7. Provide mechanical, plumbing and electrical connections to Contractor installed products including installation of service fixtures for products listed in the following categories: OFCR, OFCI.
 8. Afford Owner's forces a reasonable opportunity for delivery and storage of their products and the execution of their work. Where required, Contractor shall properly connect his work to that installed by the Owner's forces.
 9. Repair or replace items damaged by Contractor.
 10. Receive and unload products at the site for products listed in the following categories: OFCI, OFCR. Handle products at the site, including uncrating and storage for products listed in the following categories: OFCI, OFCR.

1.07 CONTRACTOR FURNISHED PRODUCTS

- A. Products furnished by Contractor consist of products listed in the following category: CFCl.
- B. Contractor's responsibilities:
 1. As indicated in the Construction Documents.

1.08 OWNER OCCUPANCY

- A. The Facility Owners' intend to occupy the existing building and site during the entire construction period.
- B. Facility Owner intends to occupy the Project by the date stated in the Agreement as the contract completion date.
- C. Cooperate with Facility Owners' to minimize conflict and to facilitate Facility Owners' operations with the least amount of inconvenience.
- D. Contractor shall take precautions to avoid excessive noise or vibration that would disturb Facility Owners' operations. When directed by Owner, Contractor shall perform certain operations at designated time of day or night in order to minimize disturbance to Facility Owner's operations.
- E. Schedule the Work to accommodate Facilities Owners' occupancy.

1.09 CONTRACTOR USE OF SITE AND PREMISES

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- A. Construction Operations: Limited to areas permitted by Law, Ordinances, Permits and Contract Documents.
- B. Arrange use of site and premises to allow:
 - 1. Owner occupancy and operation.
 - 2. Use of adjacent site and hospital premises by the public.
- C. Do not unreasonably encumber site or premises with materials or equipment.
- D. Limit use of site and premises for Work and storage as follows:
 - 1. Maintain Owner and public access to existing building, parking, drives and walks at all times.
 - 2. Restrict work and storage to construction areas indicated on Drawings.
 - 3. Existing building and parking areas may not be used for storage.
 - 4. Access site only as indicated on the Drawings.
 - 5. Restrict parking to areas designated by the Owner.
 - 6. Do not perform operations that would disrupt or delay Facility Owner's daily operations.
 - 7. Restrict construction personnel from access to other areas of the site and existing building, except as required to perform new and alterations work.
- E. Assume full responsibility for protection and safekeeping of products stored on premises.
- F. Relocate stored products which interfere with operations of the Facility Owner.
- G. Do not load structure with weight that will endanger structure.
- H. Emergency Building/Site Exits During Construction: Keep all existing site exits open during construction period. Provide barricade and signage in accordance with all requirements of the local building authorities during construction.
- I. Utility Outages and Shutdown: To be scheduled with the Owner's representative prior to implementing.

1.10 WORK SEQUENCE

- A. Coordinate construction schedule and operations with the individual Facility Owner.

1.11 BID BREAKDOWN

- A. The Contractor shall include the Bid Breakdown with their proposal on the form provided by the Government of the Virgin Islands. The costs in the breakdown shall be separated by work items, and project site.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01020 – ALLOWANCES
DEPARTMENT OF HEALTH: ELDRA SHULTERBRANDT ANNEX FACILITY
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PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements governing allowances.
 - 1. Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order. Upon issuance of final conflict documents for the allowances, the contractor will provide detailed cost breakdowns for each allowance in order to determine the final cost.
- B. Types of allowances include the following:
 - 1. Lump-sum allowances.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Modification Procedures" specifies procedures for submitting and handling Change Orders.
 - 2. Division 1 Section "Quality Control Services" specifies procedures governing the use of allowances for inspection and testing.

1.3 SELECTION AND PURCHASE

- A. Purchase products and systems selected by the Architect from the designated supplier.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine products covered by an allowance promptly upon delivery for damage or defects.

3.2 PREPARATION

- A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

- A. Allowance No. 1: Include the sum of **\$450.00** for the purchase and installation of hardware items at each door.

END OF SECTION

SECTION 01039 – COORDINATION MEETINGS
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PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Field engineering.
- C. Preconstruction meeting.
- D. Site mobilization meeting.
- E. Progress meeting.
- F. Pre-installation meetings.
- G. Equipment electrical characteristics and components.
- H. Examination.
- I. Preparation.
- J. Cutting and Patching.
- K. Alteration project procedures.

1.2 RELATED SECTIONS (NOT USED)

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various sections of the Specifications to ensure an efficient and orderly sequence of construction elements.
- B. Verify all existing utility locations.

1.4 FIELD ENGINEERING

- A. Contractor shall locate and protect all survey control and reference points, and shall accurately replace and have verified by the Engineer any such point, which is damaged or moved, at his own expense.
- B. Control datum for survey is as that shown on Drawings. The survey shall establish certain reference points and benchmarks in the immediate vicinity of the work areas. The Contractor shall lay out all additional lines and grades and otherwise do all layout and measurements necessary for the proper completion of the work.
- C. Verify setbacks and easements; confirm drawings dimensions and elevations.
- D. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

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- E. The Contractor shall furnish assistance to the Engineer as requested to check the layout or otherwise control the work. Such assistance shall be understood to include the provision of suitable manpower to assist the Engineer in taping measurements, holding a survey rod for checking grades and the like.
- F. The Engineer reserves the right to inspect or check any of this work, and the Contractor shall not claim added compensation for any delay occasioned by required as a result of the Engineer's inspections.

1.5 PRECONSTRUCTION MEETING

- A. Architect/Engineer will schedule a meeting after Notice of Award.
- B. Attendance Required: Owner, Architect/Engineer and Contractor.
- C. Agenda:
 - 1. Submission of list of testing agency and other parties providing services on the project.
 - 2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 3. Procedures for layout of the project, establishing controls, limits of right-of-way and easements.
 - 4. Scheduling.
- D. Architect/Engineer will record minutes and distribute copies to participants and those affected by decisions made.

1.6 SITE MOBILIZATION MEETING

- A. Architect/Engineer may schedule a meeting at the project site prior to construction start-up.
- B. Attendance Required: Architect/Engineer, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
 - 1. Use of the site by Owner and Contractor.
 - 2. Owner's requirements.
 - 3. Construction facilities provided by Contractor.
 - 4. Temporary utilities provided by Contractor.
 - 5. Security and housekeeping procedures.
 - 6. Schedules.
 - 7. Application for payment procedures.
 - 8. Procedures for testing.
 - 9. Procedures for maintaining record documents.
- D. Engineer will record minutes and distribute copies to participants and those affected by decisions made.

1.7 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout the progress of the Work at weekly intervals or intervals agreed to by Owner/Architect-Engineer/Contractor.

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- B. Architect/Engineer will make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Architect/Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedule.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.
 - 11. Maintenance of quality and work standards.
 - 12. Effect of proposed changes on progress schedule and coordination.
 - 13. Other business relating to Work.
- E. Architect/Engineer will record minutes and distribute copies to participants and those affected by decisions made.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 CUTTING AND PATCHING

- A. Employ skilled and experienced installer to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements which affect:
 - 1. Structural integrity of element.
 - 2. Integrity of weather-exposed or moisture-resistant elements.
 - 3. Efficiency, maintenance, or safety of element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work; and which will provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.

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- F. Restore Work with new Products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, roof, or floor construction; completely seal voids.
- I. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire suit.
- J. Identify hazardous substances or conditions exposed during the Work to the Architect/Engineer for decision or remedy.

3.2 ALTERATION PROJECT PROCEDURES

- A. Materials: As specified in Product sections; matching existing Products and work for patching and extending work.
- B. Employ skilled and experienced installer to perform alteration work.
- C. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- D. Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring Products and finishes to original or specified condition.
- E. Refinish existing visible surfaces to remain in renovated rooms and spaces, to specified or renewed condition for each material, with a neat transition to adjacent finishes.
- F. Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- G. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Architect/Engineer for review.
- H. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- I. Finish surfaces as specified in individual Product sections.

END OF SECTION

SECTION 01045 – CUTTING AND PATCHING
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PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division – 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - 1. Requirements of this Section apply to mechanical and electrical installations. Refer to Division – 15 and Division – 16 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.
 - 2. Demolition of selected portions of the building for alterations is included in Section "Selective Demolition."

1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required and how it is to be performed indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform Work.
 - 4. Indicate dates when cutting and patching is to be performed.
 - 5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
 - 6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
 - 7. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.4 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
 - 1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction.
 - b. Bearing and retaining walls.
 - c. Structural concrete.

SECTION 01045 – CUTTING AND PATCHING
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- d. Structural steel.
 - e. Lintels.
 - f. Timber and primary wood framing.
 - g. Structural decking.
 - h. Stair systems.
 - i. Miscellaneous structural metals.
 - j. Exterior curtain wall construction.
 - k. Equipment supports.
 - l. Piping, ductwork, vessels and equipment.
 - m. Structural systems of special construction.
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
- 1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Shoring, bracing, and sheeting.
 - b. Primary operational systems and equipment.
 - c. Air or smoke barriers.
 - d. Water, moisture, or vapor barriers.
 - e. Membranes and flashings.
 - f. Fire protection systems.
 - g. Noise and vibration control elements and systems.
 - h. Control systems.
 - i. Communication systems.
 - j. Conveying systems.
 - k. Electrical wiring systems.
 - l. Special construction specified by Division – 13 Sections.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.
- 1. If possible retain the original installer or fabricator to cut and patch the following categories of exposed Work, or if it is not possible to engage the original installer or fabricator, engage another recognized experienced and specialized firm:
 - a. Processed concrete finishes.
 - b. Stonework and stone masonry.
 - c. Ornamental metal.
 - d. Matched-veneer woodwork.
 - e. Preformed metal panels.
 - f. Window wall system.
 - g. Stucco and ornamental plaster.
 - h. Acoustical ceilings.
 - i. Terrazzo.
 - j. Finished wood flooring.
 - k. Fluid-applied flooring.
 - l. Carpeting.
 - m. Aggregate wall coating.
 - n. Wall covering.
 - o. Swimming pool finishes.
 - p. HVAC enclosures, cabinets or covers.

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PART 2 – PRODUCTS

2.1 MATERIALS

- A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
 - 1. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

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2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 3. Cut through concrete and masonry using a cutting machine such as a carborundum saw or diamond core drill.
 4. Comply with requirements of applicable Sections of Division – 2 where cutting and patching requires excavating and backfilling.
 5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken containing the patch, after the patched area has received primer and second coat.
 4. Patch, repair or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.
- D. Plaster Installation: Comply with manufacturer's instructions and install thickness and coats as indicated.
1. Unless otherwise indicated provide 3-coat Work.
 2. Finish gypsum plaster with smooth-toweled finish. Sand lightly to remove trowel marks and arises.
 3. Cut, patch, point-up and repair plaster to accommodate other construction and to restore cracks, dents and imperfections.

3.4 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION

SECTION 01095 – REFERENCE STANDARDS AND DEFINITIONS
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PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. Indicated: The term indicated refers to graphic representations, notes, or schedules on Drawings, or other Paragraphs of Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as shown, noted, scheduled, and specified are used to help the reader locate the reference. There is no limitation on location.
- C. Directed: Terms such as directed, requested, authorized, selected, approved, required and permitted mean directed by the Architect, requested by the Architect, and similar phrases.
- D. Approved: The term approved, when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulations: The term regulations includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term furnish means supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. Install: The term describes operations at the Project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. Provide: The term provide means to furnish and install, complete and ready for the intended use.
- I. Installer: An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
 - 1. Trades: Using terms such as carpentry is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as carpenter. It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.
- J. Project site is the space available to the Contractor for performing construction activities either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

SECTION 01095 – REFERENCE STANDARDS AND DEFINITIONS
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- K. Testing Agencies: A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to reports on and, if required, to interpret results of those inspections or tests.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specification Institute's 16-Division Format and MASTER FORMAT numbering system.
- B. Specification Content: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words that are implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicate.
 2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subject language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor, or by other means when so noted.
 - a. The words "shall be" are implied wherever a colon (:) is used within a sentence or phrase.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliance with two or more standard is specified and where the standards may establish different or conflicting requirements for minimum quantities or quality levels, refer requirements that are different but apparently equal and other uncertainties to the Architect for a decision before proceeding.
1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on the project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.

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- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the Text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

1.5 SUBMITTALS

- A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION

SECTION 01200 – PRICE AND PAYMENT PROCEDURES
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PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Procedures for preparation and submittal of application for final payment.

1.2 RELATED SECTIONS – N/A

1.3 SCHEDULE OF VALUES

- A. Submit a printed schedule on form provided by the Virgin Islands Government, Department of Property and Procurement.
- B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- C. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section. Identify site mobilization, bonds, and insurance, and site demobilization.
- D. Revise schedule to list approved Change Orders, with each Application for Payment.

1.4 APPLICATIONS FOR PROGRESS PAYMENT

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Present required information as typewritten/computer-generated form.
- C. Form will be provided by the Virgin Islands Government, Department of Property and Procurement.
- D. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of Work.
 - 3. Scheduled Values.
 - 4. Previous Applications
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Total Completed and Stored to Date of Application.
 - 7. Percentage of Completion.
 - 8. Balance to Finish.
 - 9. Retainage.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

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- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original time of Work.
- H. Submit three copies of each Application for Payment.
- I. Include the following with the application:
 - 1. Transmittal Letter as specified for Submittals in Section 01300.
 - 2. Construction progress schedule, revised and current as specified in Section 01300.
 - 3. Current construction photographs specified in Section 01300.
 - 4. Partial release of liens from major Subcontractors and Vendors.
 - 5. Affidavits attesting to off-site stored products.
- J. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.5 MODIFICATION PROCEDURES

- A. Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time as authorized by the Conditions of the Contract by issuing supplemental instructions on a Change Order form provided by the Virgin Islands Government, Department of Property and Procurement
- B. Construction Change Directive: Architect may issue a document, signed by Owner, instructing Construction Manager to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. The document will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change in Work.
- C. Proposal Request: Architect may issue a document which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Construction Manager shall prepare and submit a fixed price quotation within 15 days.
- D. Computation of Change in Contract Amount:
 - 1. For change requested by Architect for work falling under a fixed price contract, the amount will be based on Construction Manager's price quotation.
 - 2. For change requested by Construction Manager, the amount will be based on the Construction Manager's request for a Change Order as approved by Owner.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by Architect without a quotation from the Construction Manager, the amount will be determined by Architect based on the Construction Manager's substantiation of costs as specified for Time and Material Work.
- E. Substantiation of Costs: Provide full information required for evaluation.
 - 1. Provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.

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- d. Justification for any change in Contract Time.
- e. Credit for deletions from Contract, similarly documented.
- 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
- 3. For Time and Material Work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- F. Execution of Change Orders: Change Orders shall be issued for signatures of parties as provided in the Conditions of the Contract Forms provided by the Virgin Islands Government, Department of Property and Procurement.
- G. After execution of Change Order, promptly revise Schedules of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- H. Promptly revise Progress Schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

1.6 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 - 1. All closeout procedures specified in Section 01700.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

END OF SECTION

SECTION 01300 – SUBMITTALS
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PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Project coordination.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Progress photographs.

1.2 RELATED SECTIONS

- A. Section 01700 – Execution Requirements: Additional coordination requirements.

1.3 PROJECT COORDINATION

- A. Contractor: The Contractor shall be responsible for overall project coordination between subcontractors and trade contractors.
- B. Cooperate with the Contractor in allocation of mobilization areas of site; for field offices and storage, for personnel access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Contractor.
- D. Comply with Contractor procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts. Particular attention should be given to the Contractor's subcontractor safety policy.
- E. Comply with instructions of the Contractor for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions of the Contractor.
- G. Make the following types of submittals to Architect through the Contractor:
 - 1. Requests for Interpretation.
 - 2. Requests for Substitution.
 - 3. Shop Drawings, Product Data, and Samples.
 - 4. Test and Inspection Reports.
 - 5. Manufacturer's Instructions and Field Reports.
 - 6. Applications for Payment and Change Order requests.
 - 7. Progress Schedules.
 - 8. Coordination of Drawings.
 - 9. Closeout Submittals.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PRECONSTRUCTION MEETING

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- A. Contractor will schedule a meeting after Notice of Award and prior to mobilization.
- B. Attendance Required:
 - 1. Owner.
 - 2. Architect and invited Consultants.
 - 3. Contractor: Project Manager and Job Superintendent.
 - 4. Major Sub-contractors as requested by the Owner, Architect and Contractor.
- C. Minimum Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Submission of progress schedule.
 - 4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal requests, Change Orders, and Contract closeout procedures.
 - 5. Use of premises by Owner and Contractor.
 - 6. Construction facilities and controls provided by Owner.
 - 7. Temporary utilities provided by Owner.
 - 8. Survey and building layout.
 - 9. Security and housekeeping procedures.
 - 10. Schedules.
 - 11. Application for payment procedures.
 - 12. Procedures for testing.
 - 13. Procedures for maintaining record documents.
 - 14. Scheduling.
 - 15. Scheduling activities of Material Testing.
- D. Contractor shall record minutes and distribute copies within five days after meeting to participants, with one copy to Architect, Owner, participants, and those affected by decisions made.

3.2 PROGRESS MEETINGS

- A. Contractor shall schedule and administer meetings throughout the progress of the Work at maximum bi-monthly intervals. A representative from each major trade contractor shall be required to attend these meetings, as requested by the Contractor.
- B. The Contractor shall make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required:
 - 1. Contractor: Project Manager and Job Superintendent.
 - 2. Owner's Representative.
 - 3. Architect.
 - 4. Major Sub-contractors as appropriate to agenda topics for each meeting.
- D. Minimum Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Maintenance of progress schedule.

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7. Corrective measures to regain projected schedules.
8. Planned progress during succeeding work period.
9. Maintenance of quality and work standards.
10. Effect of proposed changes on progress schedule and coordination.
11. Other business relating to Work.

- E. Contractor shall record minutes and distribute copies within five days after meeting to participants, with one copy to Architect, Owner, participants, and those affected by decisions made.

3.3 PROGRESS PHOTOGRAPHS

- A. Provide photographs of site and construction throughout progress of Work produced by an experienced photographer, acceptable to Architect.
- B. Take photographs as evidence of existing project conditions as follows:
1. Interior views.
 2. Exterior views.
- C. Views:
1. Provide non-aerial photographs from three cardinal views at each specified time, until Date of Substantial Completion.
 2. Consult with Architect for instructions on views required.
 3. Provide factual presentation.
 4. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
- D. Prints: Full color; three prints of each view.
1. Glossy; smooth texture; white tint; single weight; contrast grade 4, extra hard.
 2. Size: 8 x 10 inch; mounted for binder and tabs.
 3. Identify each print on back. Identify name of Project, contract number, phrase, orientation of view, date and time of view, name and address of photographer, and photographer's numbered identification of exposure.
- E. Deliver prints with Application for Payment with transmittal letter specified in this Section.

END OF SECTION

SECTION 01325 – CONSTRUCTION PROGRESS SCHEDULE
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PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.2 RELATED SECTIONS (NOT APPLICABLE)

1.3 SUBMITTALS

- A. Within 10 days after date established in Notice To Proceed, submit preliminary schedule defining planned operations for the first 30 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 30 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit the number of opaque reproductions that the Contractor requires, plus four copies which will be retained by the Architect.
- G. Submit under transmittal letter form specified in Section 01300.

1.4 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel specialist Consultant specializing in CPM scheduling with two years minimum experience in scheduling construction work of a complexities comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.5 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable Specification Section number.
- B. Sheet Size: Multiples of 8-1/2 x 11 inches.
- C. Scale and Spacing: To allow for notations and revisions.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 PRELIMINARY SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.

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3.2 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by Specification Section number.
- C. Identify Work of separate stages and other logically grouped activities.
- D. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, Products identified under Allowances, and dates reviewed submittals will be required by the Architect. Indicate decision dates for selection of finishes.
- E. Indicated delivery dates for owner-furnished products.
- F. Provide legend for symbols and abbreviations used.

3.3 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.

3.4 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.5 UPDATING SCHEDULE

- A. Maintain schedules t record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.

3.6 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, Suppliers, Architect, Owner's Representative, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION

SECTION 01400 – QUALITY CONTROL
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PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance – control of installation.
- B. Tolerances.
- C. References and standards.
- D. Mock-up.
- E. Inspecting and testing laboratory services.
- F. Manufacturers' field services.

1.2 RELATED SECTIONS

- A. Section 01000 General Specifications: Contractor's Shop and Working Drawings.

1.3 QUALITY ASSURANCE – CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration physical distortion, or disfigurement.

1.4 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.

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- B. Comply with manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.5 REFERENCES AND STANDARDS

- A. For Products or workmanship specified by association, trade, or other consensus standards, complies with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product Specification Sections.
- D. Neither the contractual relationships, duties, nor responsibilities of the parties in Contract, nor those of the Architect/Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.6 MOCK UP (NOT USED)

1.7 INSPECTION AND TESTING LABORATORY SERVICES

- A. Owner may appoint, employ, and pay for specified services of an independent firm to perform construction testing services.
- B. The independent firm will perform testing and other services specified in individual sections and as required by the Owner.
- C. Testing reports will be submitted by the independent firm to the Owner indicating services and indicating compliance or non-compliance with the Contract Documents.
- D. Cooperate with independent firm; furnish safe access and assistance by incidental labor as requested.
 - 1. Notify Architect/Engineer and/or independent firm 48 hours prior to expected time for operations requiring services. These operations include, but are not necessarily limited to:
 - a. Cast-in-place concrete placement.
 - b. Bituminous pavement construction.

1.8 INSPECTION SERVICES

- A. Owner may appoint, employ, and pay for specified services of an independent firm to perform observation.
- B. The independent firm will perform observations and other services specified in individual Specification Sections and as required by the Owner.

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- C. Reports will be submitted by the independent firm to the Owner, in duplicate, indicating observations and indicating compliance or non-compliance with Contract Documents.
- D. Cooperate with independent firm; furnish safe access and assistance by incidental labor as requested.
 - 1. Notify Architect/Engineer and /or independent firm 48 hours prior to expected time for operations requiring services.
- E. Observations do not relieve Contractor to perform Work to the contract requirements.

1.9 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual Specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer subject to approval of Architect/Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual Specification Sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

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- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01600 – MATERIAL AND EQUIPMENT HANDLING
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PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Products.
- B. Transportation and Handling.
- C. Storage and Protection.
- D. Product Options.
- E. Products List.
- F. Substitutions.

1.2 RELATED REQUIREMENTS

- A. Section 01400 – Quality Control: Submittal of manufacturer's data.
- B. Section 01700 – Contract Closeout: Operation and maintenance data.

PART 2 – PRODUCTS

2.1 GENERAL

- A. Products include the material, equipment, and systems used on this Project.
- B. Comply with the Specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.

2.2 TRANSPORTATION AND HANDLING

- A. Transport products by methods that will avoid product damage and deliver them in undamaged condition in the manufacturer's unopened containers or packaging.
- B. Provide equipment and personnel to handle unloading and storage of the products by methods to prevent soiling or damage.
- C. Promptly inspect the shipments to assure that the products comply with requirements, the quantities are correct, and the products are undamaged.

2.3 STORAGE AND PROTECTION

- A. Store products in accordance with the manufacturer's instructions, with intact and legible seals and labels.
- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover the products subject to deterioration with an impervious sheet covering; provide ventilation to avoid condensation.

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- C. Store loose granular materials on solid surfaces in a well-drained area. Prevent mixing of the materials with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure that products are undamaged, and are maintained under required conditions.

2.4 PRODUCT OPTIONS

- A. Products specified by Reference Standards or by Description Only: Furnish any product meeting those standards.
- B. Products specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not specifically named.
- C. Products specified by Naming Several Manufacturers: Products of named manufacturers meeting Specifications: No options, no substitutions will be allowed.

2.5 PRODUCTS LIST

- A. Within 15 days after the date of Owner-Contractor Agreement, submit a complete list of major proposed for use, with name of the manufacturer, trade name, and model number of each product.

2.6 SUBSTITUTIONS

- A. Only within 15 days after date of the Agreement will the Architect/Engineer consider requests from the Contractor for substitutions. Subsequently, substitutions will be considered only when a product becomes unavailable due to no fault of the Contractor.
- B. Document each request with complete data substantiating the compliance of the proposed substitution with the Contractor Documents.
- C. The request constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, the specified product.
 - 2. Will provide the same warranty for substitution as for the specified product.
 - 3. Will coordinate installation and make other changes which may be required for the Work to be complete in all respects.
 - 4. Waives claims for additional cost which may subsequently become apparent.
 - 5. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request, or when acceptance will require substantial revision of the Contract Documents.
- D. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals without separate written request, or when acceptance will require substantial revision of the Contract Documents.
- E. The Architect/Engineer will determine acceptability of the proposed substitution, and will notify the Contractor of acceptance or rejection in writing within a reasonable time.
- F. Only one request for the substitution will be considered for each product. When substitution is not accepted, provide the specified product.

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2.7 SYSTEM DEMONSTRATION

A. Prior to the final inspection, demonstrate operation of the entire system to the Owner.

PART 3 – EXECUTION (NOT USED)

END OF SECTION

SECTION 01620 – TRANSPORTATION AND HANDLING
DEPARTMENT OF HEALTH: ELDRA SHULTERBRANDT ANNEX FACILITY
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GENERAL

- A. The Contractor shall provide transportation of all equipment, materials and products furnished under these Contract Documents to the site of the Work. In addition, the Contractor shall provide preparation for shipment and storage, unloading, handling and re-handling, short-term storage, extended storage, storage facilities, maintenance and protection during storage, preparation for installation, and all other work and incidental items necessary or convenient to the Contractor for the satisfactory prosecution and completion of the Work.

TRANSPORTATION

- A. All equipment shall be suitably boxed, crafted, or otherwise protected during transportation.
- B. All equipment shall be shipped and delivered in the largest assembled sections practical or permitted by carrier regulations to minimize the number of field connections.
- C. The Contractor shall be responsible for ensuring that the equipment is assembled and transported in such a manner so as to clear buildings, power lines, bridges, and similar structures encountered during shipment or delivery to the site of the Work.
- D. Where equipment will be installed using existing cranes or hoisting equipment, the Contractor shall ensure that the weights of the assembled sections do not exceed the capacity of the cranes or hoisting equipment.
- E. Small items and appurtenances such as gauges, valves, switches, instruments, and probes, which could be damaged during shipment shall be removed from the equipment prior to shipment and packaged and shipped separately. All openings shall be plugged or sealed to prevent the entrance of water or dirt.
- F. Temporary shipping braces and supports shall be painted orange or yellow for easy identification.

HANDLING

- A. All equipment, materials, and products shall be carefully handled to prevent damage or excessive deflections during unloading or transportation. All equipment, materials, and products damaged during transportation or handling shall be repaired or replaced by the Contractor at no additional cost to the Authority prior to being incorporated into the Work.
- B. Lifting and handling drawings and instructions furnished by the manufacturer or supplier shall be strictly followed. Eyebolts or lifting lugs furnished on the equipment shall be used in handling the equipment. Shafts and operating mechanisms shall not be used as lifting points. Spreader bars or lifting beams shall be used when the distances between lifting points exceeds that permitted by standard industry practice. Slings and chains shall be padded as required to prevent damage to protective coatings and finishes.
- C. Under no circumstances shall equipment or products such as pipe, structural steel, castings, reinforcement, lumber, piles, poles, etc., be thrown or rolled off of trucks onto the ground. Tossing of pipes and pipe fittings and accessories is an unacceptable practice. Items tossed shall be inspected by the Architect/Engineer and/or Project Manager. If the Architect/Engineer or Project Manager determines that the product has been comprised, Contractor shall replace product at no additional cost to Authority.

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- D. Items such as non-metallic pipe, non-metallic conduit, flagpoles, and lighting poles shall be handled using non-metallic slings or straps. Under no circumstance shall chains or steel cables be used to transport or handle non-metallic products.

END OF SECTION

SECTION 01630 – STORAGE AND PROTECTION
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GENERAL

- A. Equipment shall be received, inspected, unloaded, handled, stored, maintained, and protected by the Contractor in a suitable location on or off site, if necessary, until such time as installation is required.
- B. Storage and protection of Contractor-furnished equipment shall be strict conformance with the requirements of the Section entitled "General Equipment Stipulations" of these Specifications.

STORAGE

- A. The Contractor shall be responsible for providing satisfactory storage facilities that are acceptable to the Architect/Engineer. In the event that satisfactory facilities cannot be provided on site, satisfactory warehouse, acceptable to the Architect/Engineer, will be provided by the Contractor for such time until the equipment, materials, and products can be accommodated at the site.
- B. Equipment, materials, and products that are stored in a satisfactory warehouse acceptable to the Architect/Engineer will be eligible for progress payments as though they had been delivered to the job site.
- C. The Contractor shall be responsible for the maintenance and protection of all equipment, materials, and products placed in storage and shall bear all costs of storage, preparation for transportation, transportation, re-handling, and preparation for installation.
- D. Equipment and products stored outdoors shall be supported above the ground on suitable wooden blocks or braces arranged to prevent excessive deflection or bending between supports. Items such as pipe, structural steel, and sheet construction products shall be stored with one end elevated to facilitate drainage.
- E. Unless otherwise permitted in writing by the Architect/Engineer, building products and materials such as cement, grout, plaster, gypsum-board, particle-board, resilient flooring, acoustical tile, paneling, finish lumber, insulation, wiring, etc., shall be stored indoors in a dry location. Building products such as rough lumber, plywood, concrete block, and structural tile may be stored outdoors under a properly secured waterproof covering.
- F. Tarpaulins and other coverings shall be supported above the stored equipment or materials on wooden strips to provide ventilation under the cover and minimize condensation. Tarpaulins and covers shall be arranged to prevent ponding of water.
- G. PVC pipe, if stored outside, shall be suitably protected from sunlight (UV) by covering with a tarp. Such covering shall be completed and continual.

EXTENDED STORAGE

- A. In the event that certain items of major equipment such as air compressors, pumps, and mechanical aerators have to be stored for an extended period of time, the Contractor shall provide satisfactory long-term storage facilities that are acceptable to the Architect/Engineer. The Contractor shall provide all special packaging, protective coverings, protective coatings, power, nitrogen purge, desiccants, lubricants, and exercising necessary or recommended by the manufacturer to properly maintain and protect the equipment during the period of extended storage.

END OF SECTION

SECTION 01700 – CONTRACT CLOSEOUT
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PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division – 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
1. Inspection procedures.
 2. Project record document submittal
 3. Operating and maintenance manual submittal.
 4. Submittal of warranties.
 5. Final cleaning.
- B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions: 2 through 26.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.
1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - a. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
 2. Advise Owner of pending insurance change-over requirements.
 3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
 5. Deliver tools, spare parts, extra stock, and similar items.
- B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.
1. The Architect will repeat inspection when requested and assured that the Work has been substantially completed.
 2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.4 FINAL ACCEPTANCE

- A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

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1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
 2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
 3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect.
 4. Submit consent of surety to final payment.
 5. Submit a final liquidated damages settlement statement.
 6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.
1. Upon completion of reinspection, the Architect will prepare a certificate of final acceptance, or advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 2. If necessary, reinspection will be repeated.

1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the Work.
 2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
 3. Note related Change Order numbers where applicable.
 4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set.
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data.
1. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

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- D. Record Product Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.
 - 1. Upon completion of mark-up, submit complete set of record Product Data to the Architect for the Owner's records.
- E. Record Sample Submitted: Immediately prior to the date or dates of Substantial Completion, the Contractor will meet at the site with the Architect and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the Work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect for the Owner's records.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.1 CLOSEOUT PROCEDURES

- A. Operating and Maintenance Instructions: Arrange for each installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. Include a detailed review of the following items:
 - 1. Record documents.
 - 2. Spare parts and materials.
 - 3. Tools.
 - 4. Cleaning.
 - 5. Warranties and bonds.

3.2 FINAL CLEANING

- A. General: General cleaning during construction is required by the General Conditions and included in Section "Temporary Facilities".
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
 - 1. Complete the following cleaning operations before requesting inspection for Final Acceptance.
 - a. Remove labels that are not permanent labels.
 - b. Clean exposed exterior hard-surfaced finishes to a dust-free condition, free of stains, film and similar foreign substances.

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- c. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean light fixtures and lamps.
 - d. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
 - 1. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

END OF SECTION

SECTION 01710 – CLEANUP
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GENERAL

During its progress, the Work and the adjacent areas affected thereby shall be kept cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.

Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipe structures, as a result of Work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the Work, and the ditches, channels, drains, pipes, structures, and work, etc., shall upon completion of the Work, be left in a clean and neat condition.

On or before the completion of the Work, the Contractor shall, unless otherwise especially directed or permitted in writing, tear down and remove all temporary buildings and structures built by him; shall remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.

Upon completion of the Work, the Contractor shall remove from the sites of the subsurface explorations all of his plant, machinery, tools, equipment, temporary work, and surplus materials; shall, unless otherwise directed or permitted in writing, remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operations in a neat and satisfactory condition.

The Contractor shall thoroughly clean all materials and equipment installed by him and his subcontractors, and on completion of the Work shall deliver it undamaged and in fresh and new-appearing condition. All mechanical equipment shall be fully charged with lubricant and ready for operation.

The Contractor shall restore or replace, when and as directed, any public or private property damaged by his Work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration. The restoration of existing property or structures shall be done as promptly as practicable as work progresses and shall not be left until the end of the contract period.

END OF SECTION

SECTION 01730 – GUARANTEES AND WARRANTIES
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1 – GENERAL

- A. The Contractor shall warrant all equipment, materials, products, and workmanship provided by the Contractor under the Contract for a period of twelve (12) months after the date of final acceptance of the Work by the Authority.
- B. If, during the warranty period:
 - (a) Any equipment, materials, or products furnished and/or installed by the Contractor are found to be defective in service by reason on the Contractor's faulty process, structural and/or mechanical design or Specifications; or
 - (b) Any equipment, materials, or products furnished by the Contractor shall, as soon as possible after receipt such defective equipment, materials or products, or replace such defective equipment, materials or products.
- C. In the event of multiple equipment failures or major consequences prior to the expiration of the one-year warranty described above, the affected equipment shall be disassembled, inspected, and modified or replaced as necessary to prevent further occurrences. All related components that may have been damaged or rendered non-serviceable as a consequence of the equipment failure shall be replaced. A new twelve (12) month warranty against defective or deficient design, workmanship, and materials shall commence on the day that the item of equipment is reassembled and placed back into operation. As used herein, multiple equipment failures shall be interpreted to mean two (2) or more successive failures of the same kind in the same item of equipment or failures of the same kind in two (2) or more items of equipment. Major equipment failures may include, but are not limited to, cracked or broken housings, piping, or vessels, excessive deflections, bent or broken shafts or structural members, broken or chipped gear teeth, overheating, premature bearing failure, excessive wear, or excessive leakage around seals. Equipment failures which are directly and clearly traceable to operator abuse, such as operating the equipment in conflict with published operating procedures, or improper maintenance, such as substitution of unauthorized replacement parts, use of incorrect lubricants or chemicals, flagrant over-or-under lubrication, and using maintenance procedures not conforming with published maintenance instructions, shall be exempted from the scope of the one-year warranty. Should multiple equipment failures occur in a given item or type of equipment, all equipment of the same size and type shall be disassembled, inspected, modified or replaced, as necessary, and re-warranted for one (1) year.

2 – START-UP OF OPERABLE COMPONENTS

- A. Because of the need to maintain operation during construction, it will be necessary to accept and start-up operable components of the project at various times prior to the completion and final acceptance of the entire project.
- B. A component of the project, as used herein, shall mean a complete process subsystem and shall include all associated structures, equipment, piping, controls, etc.
- C. When a component of the project has been completed, checked out, field tested, and made ready for operation, the Contractor shall notify the Architect/Engineer in writing that the component is substantially complete and request an inspection for substantial completion. The Architect/Engineer will schedule the inspection within ten (10) days of the Contractor's request. If he concurs in the Contractor's statement, the Architect/Engineer will notify the Contractor in writing that the component is accepted as substantially complete.

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At the same time, the Architect/Engineer will submit to the Contractor a list of items that must be completed or corrected before final acceptance can be given.

- D. If a component of the project is needed in order to maintain operation during construction and if it has been accepted as substantially complete, the Contractor shall start up the component when directed by the Architect/Engineer. Once the component has achieved stable and satisfactory operation (minimum 95 percent availability over a 7-day period), the Contractor shall request beneficial occupancy by the Authority. The Authority, if he concurs in the Contractor's statement, that stable and satisfactory operation has been achieved, will notify the Contractor in writing within ten (10) days that he is assuming beneficial occupancy of the component.
- E. On the date that the Authority assumes beneficial occupancy, the following shall occur:
 - 1. The one-year warranties for the component specified in Part 1-A of this section will begin; and
 - 2. The Authority will assume responsibility for operating and maintaining the component.

END OF SECTION